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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Appln. of: Robert Wastlhuber et al.

Appln. No.: 09/884,553

Filed: June 18, 2001

For: METHOD AND DEVICE FOR SERIAL  
DATA TRANSMISSION BETWEEN A  
POSITION MEASURING SYSTEM AND A  
PROCESSING UNIT

Examiner: Qureshi, Afsar M.

Art Unit: 2667

Attorney Docket No: 56/353

Mail Stop Issue Fee  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**TRANSMITTAL**

Sir:

**Attached is/are:**

- ☒ Supplemental Information Disclosure Statement, PTO Form 1449, Thirteen (13) Cited References, Deposit Account No. 23-1925 Charge of \$180.00.
- ☒ Return Receipt Postcard

**Fee calculation:**

- ☒ No additional fee is required.
- ☐ Small Entity.
- ☐ An extension fee in an amount of \$\_\_\_\_\_ for a \_\_\_\_\_-month extension of time under 37 C.F.R. § 1.136(a).
- ☐ A petition or processing fee in an amount of \$\_\_\_\_\_ under 37 C.F.R. § 1.17(\_\_\_\_\_).
- ☐ An additional filing fee has been calculated as shown below:

					Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Rate	Add'l Fee	or	Rate	Add'l Fee
Total		Minus			x \$25=			x \$50=	
Indep.		Minus			x 100=			x \$200=	
First Presentation of Multiple Dep. Claim						+\$180=		+ \$360=	
					Total	\$		Total	\$

**Fee payment:**

- ☐ A check in the amount of \$\_\_\_\_\_ is enclosed.
- ☒ Please charge Deposit Account No. 23-1925 in the amount of \$180.00. A copy of this Transmittal is enclosed for this purpose.
- ☐ Payment by credit card in the amount of \$\_\_\_\_\_ (Form PTO-2038 is attached).
- ☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

John C. Freeman, Esq. (Reg. No. 34,483)

July 10, 2007  
Date

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PATENT  
CASE NO. 56/353

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 ) Group Art Unit: 2667  
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Serial No.: 09/884,553 )  
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BETWEEN A POSITION )  
MEASURING SYSTEM AND )  
A PROCESSING UNIT )

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Mail Stop Issue Fee  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In compliance with Applicants' duty of disclosure under 37 C.F.R. § 1.56 and in conformance with 37 C.F.R. §§ 1.97-1.98, Applicants hereby submit the following reference for consideration by the Examiner. In particular the requirements of 37 C.F.R. § 1.97(d) have been satisfied as shown by (1) the attached certification in accordance with 37 C.F.R. § 1.97(e) and (2) the concurrent charging of the undersigned's firm's deposit account in the amount of \$ 180 to cover the Rule 97(d) petition fee set forth under Rule 1.17(p). Copies of the references, except the cited

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U.S. Patents and the previously cited Kennel et al. article and foreign references DE 30 01 331 C2, DE 40 05 087 C1, DE 43 44 916 A1, EP 0 660 209 B1, DE 197 14 152 A1 and DE 198 11 095 A1, and a completed copy of Form PTO-1449 are enclosed.

**I. DISCLOSURE**

**A. U.S. Patents**

<u>Patent No.</u>	<u>Inventor</u>	<u>Issue Date</u>
5,371,859	Lennartsson	12/06/94
5,687,103	Hagl et al.	11/11/97
5,909,371	Rehm et al.	06/01/99

**B. Foreign Patent References**

<u>Reference No.</u>	<u>Country</u>	<u>Pub. Date</u>
DE 30 01 331 C2	W. Germany	07/23/81
DE 40 05 087 C1	Germany	08/01/91
DE 43 44 916 A1	Germany	06/30/94
EP 0 631 239 A2	EP	12/28/94
EP 0 660 209 A1	EP	06/28/95
WO 96/33450	WIPO	10/24/96
EP 0 660 209 B1	EP	10/30/96
DE 691 25 475 T2	Germany	02/02/98
DE 197 14 152 A1	Germany	08/13/98
DE 198 11 095 A1	Germany	09/30/99
EP 0 989 701 A2	EP	03/29/00
DE 694 32 726 T2	Germany	05/28/03

### C. Literature

1. Biaesch-Wiebke, Claus, "CD-Player und R-DAT-Recorder", published by VOGEL Buchverlag, Würzburg, Germany, 1988, pp. 89-90.
2. Kennel, Ralph et al., "Datenkommunikation über das Bussystem „SERCOS interface“ – Auswirkungen auf Antriebsregelungen in Werkzeugmaschinen," Automatisierungstechnische Praxis – ATP, Oldenbourg Verlag, München, Germany, Vol. 33, No. 7, July 1, 1991, pp. 363-368.
3. Baginski, Alfredo, et al., "InterBus-S – Grundlagen und Praxis", published by Hüthig Buch Verlag, Heidelberg, Germany, 1994, two page forward and pp. 13; 28; 29; 39; 42; 49; 68-71; 73-75; 82 and 85.
4. Author unknown, "InterBus-S, Sensor-/Aktornetzwerk für industrielle Steuerungssysteme" published by DIN Deutsches Institut für Normung e.V., May, 1994, pp. 1 and 4.
5. Author unknown, „CANOpen – CAN Based Communication Profile for Industrial Systems – Revision 3.0“, published by CAN in Automation, October, 1996, pp. 1-1; 2-1; 3-1; 4-1-4; 5-1-7; 6-1-2; 7-1-5; 8-1-14; 9-1-2; 10-1-38; 11-1-5; 12-1-15 and Seite 1-7.
6. Baginski, Alfredo, et al., "InterBus – Grundlagen und Praxis", published by Hüthig Buch Verlag, Heidelberg, Germany, 1998, pp. 11-14; 16; 17; 19-22; 36, 37; 47-51; 68-71; 82; 117 and 162.
7. Reißweber, Bernd, "Feldbussysteme", published by R. Oldenbourg Verlag, München, Germany, 1998, pp. 220 and 227.

8. Domanowski, F., et al., “AS-Interface – The Actuator-Sensor-Interface for Automation“, second revised edition, published by Carl Hanser Verlag, München, Germany, 1999, p. 30.

## **II. DISCUSSION**

### **A. U.S. Patent No. 5,371,859**

The ‘859 patent was cited in an Opposition regarding a corresponding European Patent Application.

### **B. U.S. Patent No. 5,687,103**

The ‘103 patent was cited in an Opposition regarding a corresponding European Patent Application.

### **C. U.S. Patent No. 5,909,371**

The ‘371 patent was cited in an Opposition regarding a corresponding European Patent Application.

### **D. West German Patent Reference No. 30 01 331**

Based solely on the drawings and the previously supplied English language Abstract, the ‘331 patent reference is pertinent because it appears to disclose a monitor for motor vehicles where a start bit sequence of each transmitted word is used to synchronize the receiver.

The ‘331 patent reference was cited in an Opposition regarding a corresponding European Patent Application.

### **E. German Patent Reference No. 40 05 087**

Based solely on the drawings and the previously supplied English language Abstract, the ‘087 patent reference is pertinent because it appears to disclose a connection unit that provides

an acknowledgement signal after reception of a transmit signal and a data signal.

The '087 patent reference was cited in an Opposition regarding a corresponding European Patent Application.

**F. German Patent Reference No. 43 44 916**

Based solely on the drawings and the previously supplied English language Abstract, the '916 patent reference is pertinent because it appears to disclose a transmission device that uses position data and separate data.

The '916 patent reference was cited in an Opposition regarding a corresponding European Patent Application.

It is believed that U.S. Patents Nos. 5,625,353 and 5,815,089 correspond to the '916 reference.

**G. European Patent Reference No. 0 631 239**

The '239 patent reference was cited in an Opposition regarding a corresponding European Patent Application.

It is believed that U.S. Patent No. 5,600,803 correspond to the '916 reference.

**H. European Patent References Nos. 0 660 209 A1 and B1**

Based solely on the drawings and the previously filed English language Abstract, the '209 patent references are pertinent because they both appear to disclose an apparatus for serial transmission of data between a position measuring device and a processing unit. A binary code word defining an absolute position is fed to an output which causes bit-serial transmission. Commands can be transmitted serially as well. It is believed that U.S. Patent No. 5,687,103 corresponds to the '209 references.

The '209 patent references were cited in an Opposition regarding a corresponding European Patent Application.

**I. WIPO Patent Reference No. WO 96/33450**

Based solely on the drawings and the attached English language Abstract, the '450 patent reference is pertinent because it appears to disclose limiting the running time of a program sequence as a subordinate process with a time limit. It is believed that U.S. Patent No. 5,909,371 corresponds to the '450 patent reference.

The '450 patent reference was cited in an Opposition regarding a corresponding European Patent Application.

**J. German Patent Reference No. 691 25 475**

Based solely on the drawings and the enclosed English language Abstract, the '475 patent reference is pertinent because it appears to disclose a master station connected to a communication bus, wherein the master station that can assign access priority to various message data structures generated by modules connected to the communication bus. It is believed that U.S. Patent No. 5,371,859 corresponds to the '475 patent reference.

The '450 patent reference was cited in an Opposition regarding a corresponding European Patent Application.

**K. German Patent Reference No. 197 14 152**

Based solely on the drawings and the previously supplied English language Abstract, the '152 patent reference is pertinent because it appears to disclose a method of determining the maximum number of transmitted data from a time period. It is believed that U.S. Patent No. 6,480,138 corresponds to the '152 patent reference.

The '152 patent reference was cited in an Opposition regarding a corresponding European Patent Application.

**L.     German Patent Reference No. 198 11 095**

Based solely on the drawings and the previously supplied English language Abstract, the '095 patent reference is pertinent because it appears to disclose a method of using a transmission device to detect teeth and gaps in a moving object. It is believed that U.S. Patent No. 6,326,778 corresponds to the '095 patent reference.

The '095 patent reference was cited in an Opposition regarding a corresponding European Patent Application.

**M.     European Patent Reference No. 0 989 701**

Based solely on the drawings and the enclosed English language Abstract, the '701 patent reference is pertinent because it appears to disclose a serial data bus that has dominant and recessive states, each associated with a bit value. It is believed that U.S. Patent No. 6,542,947 corresponds to the '701 patent reference.

The '701 patent reference was cited in an Opposition regarding a corresponding European Patent Application.

**N.     German Patent Reference No. 694 32 726**

Based solely on the drawings and the enclosed English language Abstract, the '726 patent reference is pertinent because it appears to disclose a system with a serial bus for transferring data and a microcomputer controller that asserts a busy line if it is already not busy and transfers data. It is believed that U.S. Patent No. 5,600,803 corresponds to the '726 patent reference.

The '726 patent reference was cited in an Opposition regarding a corresponding European Patent Application.



**O. Biaesch-Wiebke Reference**

The Biaesch-Wiebke reference is pertinent because it appears to provide an overview of the basic concepts and the respective circuitry of CD-players and R-DAT recorders in the entertainment industry. Furthermore basic knowledge is provided in connection with digital audio technique, manufacture and structure of compact discs, optical scanning of compact discs, basic design of cd players etc.

The Biaesch-Wiebke article was cited in an Opposition regarding a corresponding European Patent Application.

**P. Kennel et al. Article**

Based solely on the drawings and the English-language Abstract printed with the article, the Kennel et al. article is pertinent because it appears to disclose a new SERCOS interface that allows numerical controls and intelligent drives to start a high performance data exchange with each other. The SERCOS interface replaces the well-known analogue  $\pm 10$ -V-interface for reference and real values and additionally takes care for many functions like extended diagnostics and adaptive controls. Furthermore the SERCOS interface is the basis for extended control algorithms or completely new control strategies in machine tools or similar systems with distributed controls. The standardization of the SERCOS interface gives the possibility of combining a drive system with components of different manufacturers which are optimized on the application in each case. Applications outside the machine tool area are also possible.

The Kennel et al. article was cited in an Opposition regarding a corresponding European Patent Application.

**Q. Baginski et al. InterBus-S Reference**

The Baginski et al. InterBus-S reference is pertinent because it appears to provide an overview over different protocol variants which are used in the industrial sensor/actor communication field. A detailed description of the INTERBUS-S system is given, especially of the Interbus-S protocol, the system design, the user interface (Layer 7) and the system diagnosis.

The Baginski et al. InterBus-S reference was cited in an Opposition regarding a corresponding European Patent Application.

**R. InterBus-S, Sensor Reference**

The InterBus-S, Sensor reference is pertinent because it appears to describe the sensor/actuator interface INTERBUS-S which is a digital serial communication system for the communication between control systems and devices in the whole area of industrial sensors/actuators. I/O data is transmitted according to the INTERBUS-S in contrast to other field bus systems in frames. This kind of transmission scheme ensures that a timely equidistant sampling of process data is possible. Furthermore it can be guaranteed that the amount of data per bus participant can be reduced in contrast to other transmission schemes in a line topology.

The InterBus-S, Sensor reference was cited in an Opposition regarding a corresponding European Patent Application.

**S. CANOpen Reference**

The CANOpen reference was cited in an Opposition regarding a corresponding European Patent Application.

**T. Baginski et al. InterBus Reference**

The Baginski et al. InterBus reference is pertinent because it appears to provide an overview over different protocol variants which are used in the industrial sensor/actor

communication. A detailed description of the INTERBUS-S system is given especially of the Interbus-S protocol, the system design, the user interface (Layer 7) and the system diagnosis. an overview over different protocol variants which are used in the industrial sensor/actor communication field.

The Baginski et al. InterBus reference was cited in an Opposition regarding a corresponding European Patent Application.

**U.     Reißenweber et al. Reference**

The Reißenweber et al. reference is pertinent because it appears to describe the function and application of the most important field bus systems in the automation technology. In some introducing chapters common characteristics of different field bus architectures are described, in further chapters the most important field bus systems are described in detail.

The Reißenweber et al. InterBus reference was cited in an Opposition regarding a corresponding European Patent Application.

**V.     Domanowski et al. Reference**

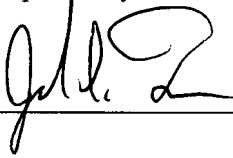
The Domanowski et al. reference was cited in an Opposition regarding a corresponding European Patent Application.

**III.   CONCLUSION**

It is not believed that any of these references, alone or in combination, disclose or suggest the invention claimed. However, Applicants wish to make it clear that the disclosure of the above references is in no way an admission that they qualify as prior art. It is Applicants' desire, however, to have these references available in the record for both the Examiner and the public to

see. Applicants therefore request that the Examiner review the entire disclosure of each reference and make the above-listed references of record.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John C. Freeman", is written over a horizontal line.

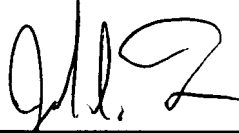
John C. Freeman  
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Dated: July 10, 2007

**CERTIFICATION UNDER 37 C.F.R. § 1.97(e)(1)**

I, John C. Freeman, certify that each item of information contained in the information disclosure statement attached hereto was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the attached information disclosure statement.



Date: July 10, 2007

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FORM PTO-1449	SERIAL NO. 09/884,553	CASE NO. 56/353
<b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>	FILING DATE June 18, 2001	GROUP ART UNIT 2667
(use several sheets if necessary)		APPLICANT(S): Robert Wasthuber et al.

#### REFERENCE DESIGNATION

#### U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER <small>Number-Kind Code (if known)</small>	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	A1	5,371,859	12/06/94	Lennartsson		
	A2	5,687,103	11/11/97	Hagl et al.		
	A3	5,909,371	06/01/99	Rehm et al.		

#### FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER <small>Number-Kind Code (if known)</small>	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO
	A4	DE 30 01 331 C2	07/23/81	W. Germany		N
	A5	DE 40 05 087 C1	08/01/91	Germany		N
	A6	DE 43 44 916 A1	06/30/94	Germany		N
	A7	EP 0 631 239 A2	12/28/94	EP		N
	A8	EP 0 660 209 A1	06/28/95	EP		N
	A9	WO 96/33450	10/24/96	WIPO		Y
	A10	EP 0 660 209 B1	10/30/96	EP		N
	A11	DE 691 25 475 T2	02/02/98	Germany		Y
	A12	DE 197 14 152 A1	08/13/98	Germany		N
	A13	DE 198 11 095 A1	09/30/99	Germany		N
	A14	EP 0 989 701 A2	03/29/00	EP		Y
	A15	DE 694 32 726 T2	05/28/03	Germany		Y

EXAMINER INITIAL	<b>OTHER ART – NON PATENT LITERATURE DOCUMENTS</b> <small>(Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.</small>	
	A16	Biaesch-Wiebke, Claus, "CD-Player und R-DAT-Recorder", published by VOGEL Buchverlag, Würzburg, Germany, 1988, pp. 89-90.
	A17	Kennel, Ralph et al., "Datenkommunikation über das Bussystem „SERCOS interface“ – Auswirkungen auf Antriebsregelungen in Werkzeugmaschinen," Automatisierungstechnische Praxis – ATP, Oldenbourg Verlag, München, Germany, Vol. 33, No. 7, July 1, 1991, pp. 363-368.
	A18	Baginski, Alfredo, et al., "InterBus-S – Grundlagen und Praxis", published by Hüthig Buch Verlag, Heidelberg, Germany, 1994, two page forward and pp. 13; 28; 29; 39; 42; 49; 68-71; 73-75; 82 and 85.
	A19	Author unknown, "InterBus-S, Sensor-/Aktornetzwerk für industrielle Steuerungssysteme" published by DIN Deutsches Institut für Normung e.V., May, 1994, pp. 1 and 4.

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449	SERIAL NO. 09/884,553	CASE NO. 56/353
<b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>	FILING DATE June 18, 2001	GROUP ART UNIT 2667
(use several sheets if necessary)	APPLICANT(S): Robert Wastlhuber et al.	

EXAMINER INITIAL	OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.	
	A20	Author unknown, „CANOpen – CAL Based Communication Profile for Industrial Systems – Revision 3.0“, published by CAN in Automation, October, 1996, pp. 1-1; 2-1; 3-1; 4-1-4; 5-1-7; 6-1-2; 7-1-5; 8-1-14; 9-1-2; 10-1-38; 11-1-5; 12-1-15 and Seite 1-7.
	A21	Baginski, Alfredo, et al., "InterBus – Grundlagen und Praxis", published by Hüthig Buch Verlag, Heidelberg, Germany, 1998, pp. 11-14; 16; 17; 19-22; 36, 37; 47-51; 68-71; 82; 117 and 162.
	A22	Reißenweber, Bernd, "Feldbussysteme", published by R. Oldenbourg Verlag, München, Germany, 1998, pp. 220 and 227.
	A23	Domanowski, F., et al., "AS-Interface – The Actuator-Sensor-Interface for Automation", second revised edition, published by Carl Hanser Verlag, München, Germany, 1999, p. 30.

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